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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/417,990	10/13/1999	CHRISTOPHER J. LOVETT	MSI-383US	8254

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EXAMINER	
QUELER, ADAM M	
ART UNIT	**PAPER NUMBER**
2178	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/417,990	LOVETT ET AL.	
	Examiner	Art Unit	
	Adam M. Queler	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Request for Continued Examination (RCE) filed 01/18/2006 and Amendment filed 12/27/2005.

2. Claims 30-39 are pending in the case. Claims 30, 34, and 39 are independent claims.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/27/2005 has been entered.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 35, 36, and 37-39 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 35, 36,and 37-39 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

> "Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."
>
> "Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claims 35 ,36, and 37-39, while defining an architecture (as well as a client and a server), do not define a "computer-readable medium" and is thus non-statutory for that reasons. An architecture (and client/server) can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The Office suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory.

> "In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." - MPEP 2106.IV.B.1(a)

Claim Rejections - 35 USC § 103

6. Claims 30-31, 33-34, 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty, "XML Authority Ends Waiting Games for Schema Developers," and further in view of Applicants Admitted Prior Art, and further in view of Bayeh et al. (USPN 6012098 - 2/23/1998).. "XML Authority Product Overview" hereinafter Extensibility, found at `http://www.extensibility.com/xml_authority/xml_ath_specs.htm` **(archived 5/8/1999), is cited as evidence regarding XML Authority.**

Regarding independent claim 30, Dougherty teaches converting schema elements into DTD's. Dougherty discloses an editor capable of saving schemas as DTD's (p. 1, para. 4). Dougherty taken as a whole generally describes a product that serves an editor, which allows the user to be able to commit one of the many schema types, while maintaining compatibility with others.

Extensibility is cited as evidence regarding the features of XML Authority as taught in Dougherty. Extensibility teaches, "XML Authority imports schema information residing in

existing data structures and documents," including XML documents (p. 2). In order to import the schema information, and since XML documents are text documents, inherently they must be parsed into data and schema elements.

Applicant admits that DTDs were used to validate data elements (p. 6, ll. 17-21). Applicant also admits that, in prior art systems, after validation the validation node-factory passes the objects to the tree builder node-factory (p. 6, 17-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the conversion of Dougherty with the prior art validation system of Applicant's Admitted Prior Art since a DTD's primary use was to validate XML documents (Dougherty, p.2, para. 1), it would have been logical to use a system that was known in the art at the time of the invention to facilitate the validation. It would have been further obvious to use this approach since it would not limit the user to any particular schema implementation (Dougherty, p. 1, para. 4 and Extensibility, p. 2, "Diverse...").

Dougherty does not explicitly disclose streaming elements with an API. Bayeh teaches using an API such as a servlet to communicate XML streams (col. 8, ll. 29-35). It would have been obvious to combine the streaming API of Bayeh with the XML processor of Dougherty, Authority, and Applicant's Admitted Prior Art. This combination would communicate allow the schema and data elements to be streams, and pass them using an API. This would be desirable as an API is a well-known programming construct. Additionally, a servlet is easily added to, and extends an existing system (Bayeh, col. 7, ll. 38-45), as well as using widely accepted programming techniques, which increases industry acceptance (Bayeh, col. 3, ll. 54-58).

Regarding dependent claim(s) 31, Dougherty and Extensibility teach converting from schema to DTD as explained in claim 1. Inherent in converting is constructing the DTD objects. Dougherty does not explicitly disclose streaming elements with an API. Bayeh teaches using an API such as a servlet to communicate XML streams (col. 8, ll. 29-35). Use of any API, inherently involves calling any number of methods, and Official Notice is taken that this was well-known in the art at the time of the invention. It would have been obvious to combine the streaming API of Bayeh with the XML processor of Dougherty, Authority, and Applicant's Admitted Prior Art. This combination would communicate allow the schema and data elements to be streams, and pass them using an API. This would be desirable as an API is a well-known programming construct. Additionally, a servlet is easily added to, and extends an existing system (Bayeh, col. 7, ll. 38-45), as well as using widely accepted programming techniques, which increases industry acceptance (Bayeh, col. 3, ll. 54-58).

Regarding dependent claim 33, the computer readable medium for performing the method of claim 1 is rejected under the same rationale.

Regarding independent claim 34, the architecture for performing the method of claim 1 is rejected under the same rationale.

Regarding dependent claim 36, the computer readable medium for performing the method of claim 1 is rejected under the same rationale.

Regarding dependent claim 37, the client/server for performing the method of claim 14 is rejected under the same rationale.

Regarding independent claim 39, the system for performing the method of claim 1 is rejected under the same rationale.

Regarding dependent claim 38, Dougherty and Bayeh do not explicitly disclose a node factory but Dougherty does teach that DTD's are used for validation (Dougherty, p.2, para. 1). Applicant admits it was known in the prior art to uses a validation node factory to evaluate whether the data elements comply with constraints set forth in the DTD objects (p. 6, 12-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the conversion of Dougherty and Extensibility with the prior art validation system of Applicant's Admitted Prior Art since a DTD's primary use was to validate XML documents (Dougherty, p.2, para. 1), it would have been logical to use a system that was known in the art at the time of the invention to facilitate the validation. It would have been further obvious to use this approach since it would not limit the user to any particular schema implementation (Dougherty, p. 1, para. 4 and Extensibility, p. 2, "Diverse...").

7. **Claims 32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty, Bayeh and Applicant's Admitted Prior Art as applied to claims 30 and 34 above, and further in view of Hickman et al. (USPN 6564252—filed 3/11/1999).**

Regarding dependent claims 32 and 35, Bayeh and Dougherty are silent as to tables. Hickman et al. (Hickman) discloses tables of schemas (col. 8, ll. 65-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Hickman, Bayeh and Applicant's Admitted Prior Art in order to provide a place to store the schemas.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam M. Queler whose telephone number is (571) 272-4140. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AQ

STEPHEN HONG
SUPERVISORY PATENT EXAMINER